Public Summary
University of Missouri Science and Technology

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System Description:

The Missouri University of Science and Technology's Satellite Research team (M-SAT) is preparing a pair of microsatellites, MR & MRS SAT, that use two cameras configured in a stereoscopic imager sensor on MR SAT to provide the relative state of MRS SAT during formation flight. As a technology demonstration mission, the mission was downselected by AFRL's University Nanosatellite Program by placing first in the Nanosat 8 competition. A launch opportunity is now anticipated in the near future. MR SAT acts as the inspector and MRS SAT as a resident space object (RSO). The pair will be deployed to low Earth orbit (LEO) from the ISS. Once on-orbit, MRS SAT will be released by MR SAT, and MR SAT will use "his" stereoscopic imager and cold gas propulsion system to maintain a trailing formation of about ten meters. Once this formation is achieved, MR SAT will circumnavigate MRS SAT and download images of "her" for a full three-dimensional reconstruction. The mission goal is to demonstrate that the stereoscopic imager can be used for both autonomous proximity operations as well as providing images that can be used to determine characteristics of an RSO.

Upon whom service of all documents may be made:

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